

C'
C'

- (a) hybridization for 16 hours at 65 °C in 7% SDS, 1 mM EDTA, 0.25 M Na₂HPO₄ (pH 7.2), 1% BSA and
- (b) sequential washing at 65 °C in solutions containing 2X SSC, 1X SSC, and 0.5X SSC in addition to 0.1% SDS.

27. Oil obtained from seeds of a transgenic plant, wherein said plant is transformed with a recombinant DNA construct, said construct comprising a nucleic acid sequence encoding a fatty acid hydroxylase that hybridizes to a nucleic acid probe comprising SEQ ID NO:1 or SEQ ID NO:2 or SEQ ID NO:3 under the following conditions:

- (a) hybridization for 16 hours at 65 °C in 7% SDS, 1 mM EDTA, 0.25 M Na₂HPO₄ (pH 7.2), 1% BSA and
- (b) sequential washing at 65 °C in solutions containing 2X SSC, 1X SSC, and 0.5X SSC in addition to 0.1% SDS.

28. Oil obtained from seeds of a transgenic plant, wherein said plant is transformed with a recombinant DNA construct, said construct comprising a nucleic acid sequence operably linked to a regulatory sequence, wherein said nucleic acid encodes a fatty acid hydroxylase with an amino acid sequence identity of about 60% or greater to the polypeptide of SEQ ID NO:4.

29. The oil of claim 28, wherein said nucleic acid encodes a fatty acid hydroxylase with an amino acid sequence identity of about 80% or greater to the polypeptide of SEQ ID NO:4.

30. The oil of claim 29, wherein said nucleic acid encodes a fatty acid hydroxylase with an amino acid sequence identity of about 90% or greater to the polypeptide of SEQ ID NO:4.

sub
C'

31. The oil of claim 30, wherein said nucleic acid encodes a fatty acid hydroxylase comprising SEQ ID NO:4.

32. Oil obtained from seeds of a transgenic plant transformed with a recombinant DNA construct, said construct comprising a nucleic acid sequence operably linked to a regulatory

sequence, wherein said nucleic acid is about 60% identical or greater to any one of the nucleic acids selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2 and SEQ ID NO:3.

33. The oil of claim 32, wherein said nucleic acid is about 70% identical or greater to any one of the nucleic acids selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2 and SEQ ID NO:3.

34. The oil of claim 33, wherein said nucleic acid is about 90% identical or greater to any one of the nucleic acids selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2 and SEQ ID NO:3.

35. The oil of claim 34, wherein said nucleic acid sequence comprises any one of the nucleic acids selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2 and SEQ ID NO:3.

36. The oil of any one of claims 26, 27, 30, 31, 34 or 35, wherein said plant is selected from the group consisting of rapeseed, Crambe, *Brassica juncea*, *Brassica nigra*, meadowfoam, Canola, flax, sunflower, safflower, cotton, cuphea, soybean, peanut, coconut, oil palm and corn.

37. The oil of claim 36, wherein said oil is pressed or extracted from the seeds of the transgenic plant.

38. The oil of claim 37, wherein said oil is a component of a paint, varnish, synthetic polymer, resin, lubricant or cosmetic.

39. The oil of claim 36, wherein the oil comprises one or more hydroxylated fatty acids.

40. The oil of claim 39, wherein said one or more hydroxylated fatty acids is selected from the group consisting of ricinoleic acid, 12-hydroxyoctadec-*cis*-9-enoic acid (12OH-18:1^{cisΔ⁹}); lesquerolic acid, 14-hydroxy-*cis*-11-icosenoic acid (14OH-20:1^{cisΔ¹¹}); densipolic acid, 12-hydroxyoctadec-*cis*-9,15-dienoic acid (12OH-18:2^{cisΔ^{9,15}}); auricolic acid, 14-hydroxy-*cis*-11,17-